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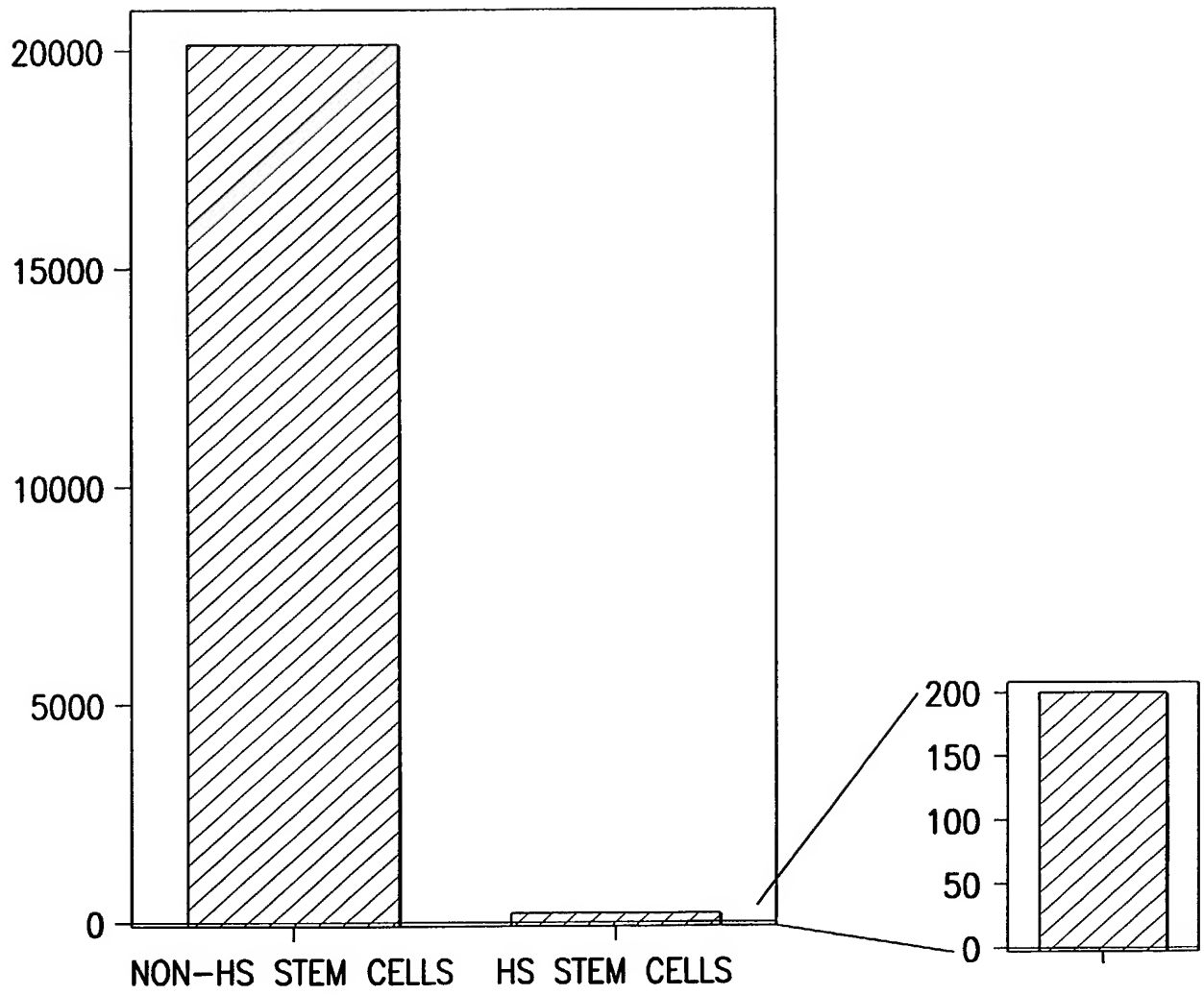


FIG.1

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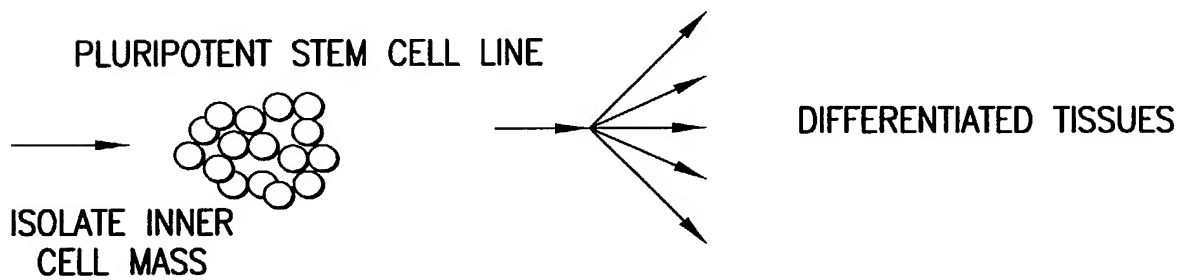
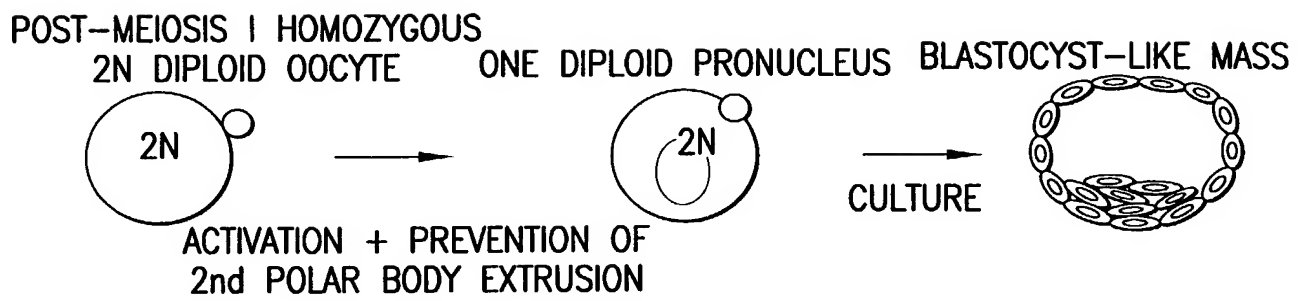


FIG.2

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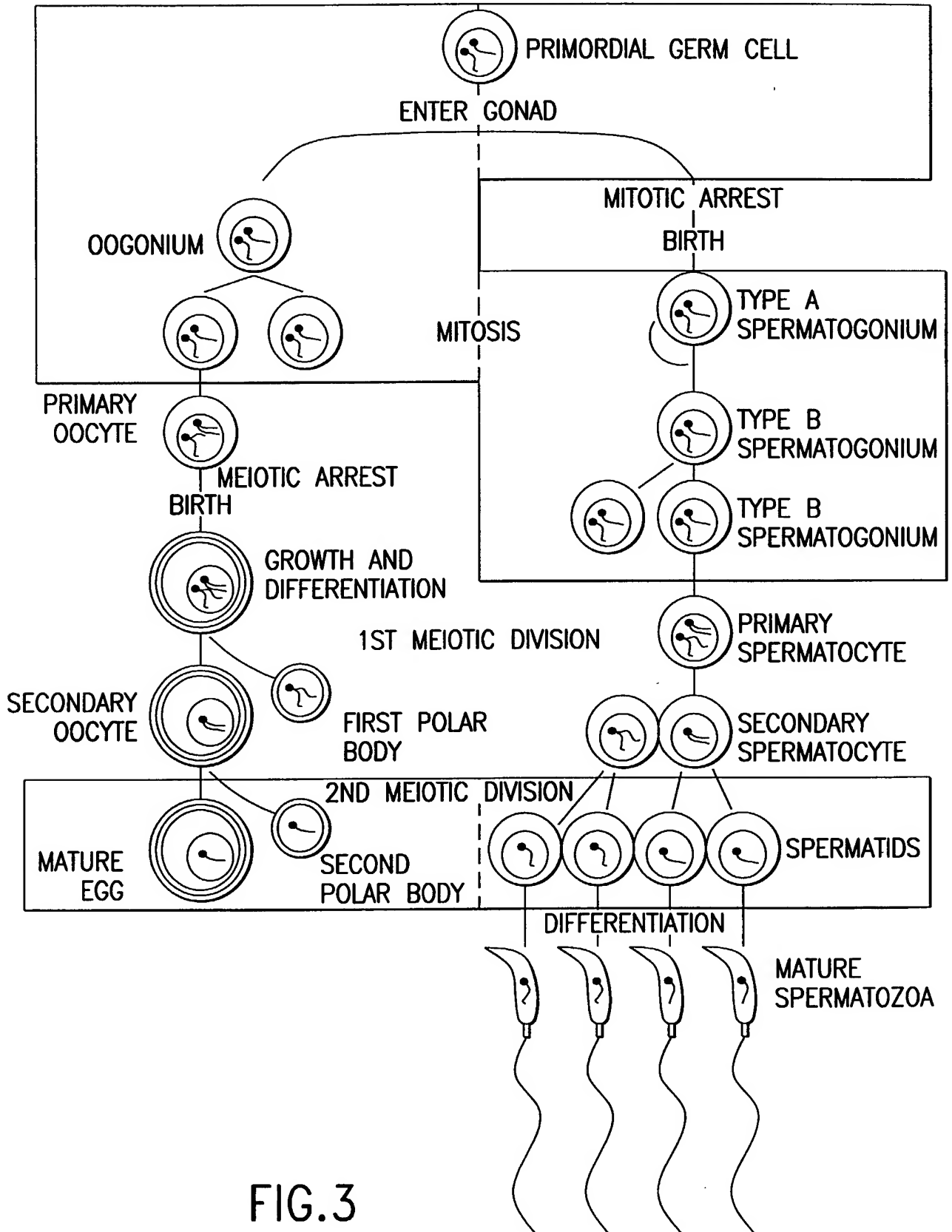


FIG.3

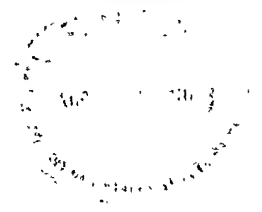
Serological Specificities of the HLA-A, -B, and -C Loci

A locus	B locus	C locus
A1 ^a	B5	B50(21) ^a
A2 ^a	B7 ^a	B51(5) ^a
A203	B703	B5102
A210	B8 ^a	B5103
A3 ^a	B12	B52(5) ^a
A9	B13 ^a	B53 ^a
A10	B14 ^a	B54(22)
A11 ^a	B15	B55(22) ^a
A19	B16	B56(22) ^a
A23(9) ^a	B17	B57(17) ^a
A24(9) ^a	B18 ^a	B58(17) ^a
A2403	B21	B59
A25(10) ^a	B22	B60(40) ^a
A26(10) ^a	B27 ^a	B61(40) ^a
A28	B35 ^a	B62(15) ^a
A29(19) ^a	B37 ^a	B63(15) ^a
A30(19) ^a	B38(16) ^a	B64(14) ^a
A31(19) ^a	B39(16) ^a	B65(14) ^a
A32(19) ^a	B3901(16)	B67
A33(19) ^a	B3902(16)	B70 ^a
A34(10) ^a	B40	B71(70) ^a
A36	B4005	B72(70) ^a
A43	B41 ^a	B73
A66	B42 ^a	B75(15)
A68(28) ^a	B44(12) ^a	B76(15)
A69(28) ^a	B45(12) ^a	B77(15)
A74(19)	B46	B7801
	B47 ^a	Bw4 ^a
	B48	Bw6 ^a
	B49(21) ^a	

^a Serological specificities to be included in a screening panel.

FIG.4A

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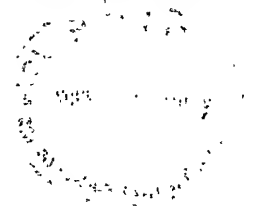
Officially Recognized HLA-DR and HLA-DQ,
Specificities 1992³

DR1	DQ1
DR103	DQ2
DR2	DQ3
DR3	DQ4
DR4	DQ5(1)
DR5	DQ6(1)
DR6	DQ7(3)
DR7	DQ8(3)
DR8	
DR9	
DR10	
DR11(5)	
DR12(5)	
DR13(6)	
DR14(6)	
DR1403	
DR1404	
DR15(2)	
DR16(2)	
DR17(3)	
DR18(3)	
DR51	
DR52	
DR53	

(N) = the broad HLA-DR or HLA-DQ specificity

FIG.4B

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Restriction Endonucleases for Genotyping of DQA1, DQB1, DRB1, DRB3, DRB5, DPA1, and DPB1 Alleles

Allele	Antigen	Restriction endonucleases
DQA1		<i>Apa</i> I, <i>Hph</i> I, <i>Bsa</i> JI, <i>Fok</i> I, <i>Mbo</i> II, <i>Mn</i> II
DQB1	DQw1	<i>Fok</i> I, <i>Apa</i> I, <i>Hae</i> II, <i>Sfa</i> NI, <i>Bss</i> HII, <i>Hph</i> I
	DQw2,3,4	<i>Fok</i> I, <i>Bgl</i> I, <i>Sac</i> I, <i>Acy</i> I, <i>Hpa</i> II
DRB1	DR1	<i>Ava</i> II, <i>Pst</i> I
	DR2	<i>Fok</i> I, <i>Cfr</i> 13I, <i>Hph</i> I
	DR3,5,6,8	<i>Ava</i> II, <i>Fok</i> I, <i>Kpn</i> I, <i>Hae</i> II, <i>Cfr</i> 13I, <i>Sfa</i> NI, <i>Sac</i> II, <i>Bsa</i> JI, <i>Apa</i> I, <i>Hph</i> I, <i>Rsa</i> I
	DR4	<i>Sac</i> II, <i>Ava</i> II, <i>Hinf</i> I, <i>Hae</i> II, <i>Hph</i> I, <i>Mn</i> II
DRB3		<i>Hinf</i> I, <i>Kpn</i> I, <i>Hph</i> I
DRB5		<i>Sfa</i> NI, <i>Cfr</i> 13I
DPA1		<i>Alu</i> I, <i>Acy</i> I, <i>Mbo</i> II
DPB1		<i>Bsp</i> 1286I, <i>Fok</i> I, <i>Dde</i> I, <i>Bsa</i> JI, <i>Bss</i> HII, <i>Cfr</i> 13I, <i>Rsa</i> I, <i>Eco</i> NI, <i>Ava</i> II

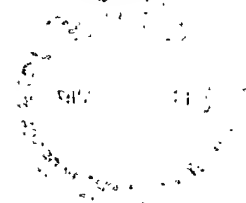
FIG.5

List of SSOs for HLA Class II Oligotyping

SSO Probes for HLA-DR Generic Typing

	Oligo seq 5'-3'	AA	Specificity
L11	TTCAAACCTTAAGCTGCCAC	9-14	DR1
D11	CTCATACTTATCTGCTGC	9-14	DR2
N77	TCTGCAGTAGTTGTCCACC	75-80	DR3
H33	CTCTTGGTGATAGAAGTATC	29-53	DR4
E58	CCAGTACTCCTCATCAGGC	56-61	DR11
L37	AGCGCAGGAGCTCCTCCTG	34-39	DR12
G11	CTTATACTTACCCCTGCCAC	9-14	DR7
L74	GTGTCCACCAGGCCCGCC	71-77	DRS (+1403)
Y26	CTGTGCAGATACCGCACCC	23-29	DR9
V11	CTCAAACCTTAACCTCCTCC	9-14	DR10
E71	GGCCCCGCTCGTCTTCCAGG	68-73	DR13 (1301, 1302, 1304)
			DR1 (0103)
			DR4 (0402, 0414)
			DR11 (1102, 03)
K71	CGGCCCGCTTGTCTTCCAG	68-73	DR13-HAG (1303)
H60	GTTCCAGTGCTCCGCAGCA	57-62	DR14 (1401, 04, 07)
N37	AGCGCACGTTCTCCTCCTG	34-39	DR3
			DR13 (1301, 02, 04, 06)
			DR14 (1402, 03, 06)
D37	GAAGCGCAAGTCTCCTCT	34-40	DR2 (DRB5*0101)
AV86	GCTCTCCACAGCCCCGTAG	83-88	DR2 (DRB5*02)
			DR1 (0102)
			DR12

FIG.6A



1.000324-95 , 0621002

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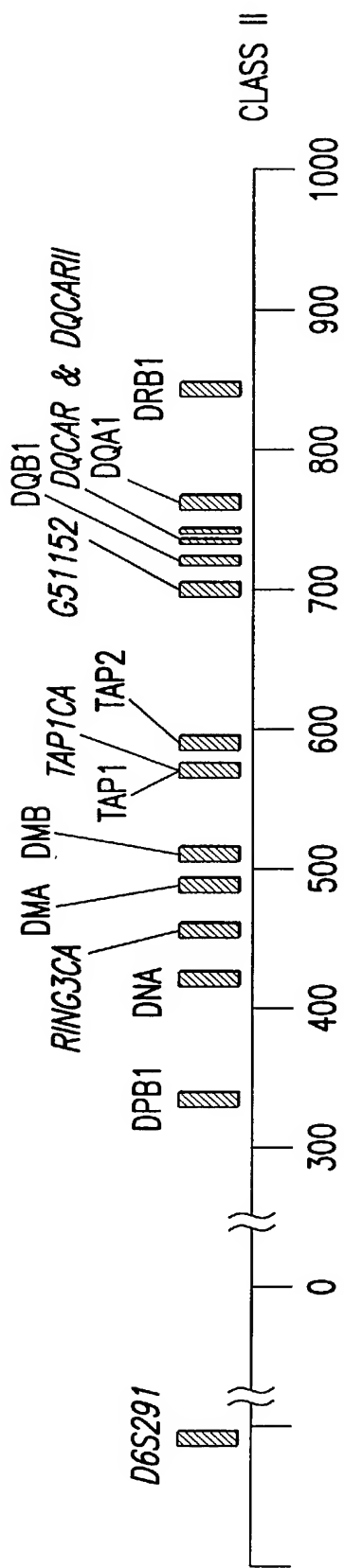
FIG. 6B

FIG. 6B

Locus	5' Primer sequence	3' Primer sequence
D6S276	5-tcaatcaaatcatccccagaag	5-ccttctttgcagactgtcacc
D6S105	5-gggattacaggcaggagccac	5-gaaggagaattgtaattccg
MOGCA	5-gaaatgtgagaataaaggaga	5-gataaagggaactactaca
D6S265	5-agtcaccctactgtgctatc	5-atcgaggtaaacagcagaaaag
MIB	5-gcttcacccgatcagtagaagac	5-gcatgggtgcagagatagtcaggtc
D6S275	5-ggagaagttgagtattttctgc	5-accaaacttcaaattttcgg
DQCAR11	5-gcactatcattaaatttgctttccacagtac	5-tgattcataaggcaagaatccagcatattgg
DQCAR	5-gaaacatatattaacagagacagacaaa	5-catttctctcttatacattcata
G51152	5-ggtaaaattcctgactggcc	5-gacagctcttcttaacctgc
TAPICA	5-gctttgatctccccctc	5-ggacaatatattgctcctgagg
RING3CA	5-tgcttataggagactaccg	5-gaggtaatgtcacaggatggg
D6S291	5-ggcattcaggcatgcctggc	5-ggggatgacgaattattcactaaact

FIG.7





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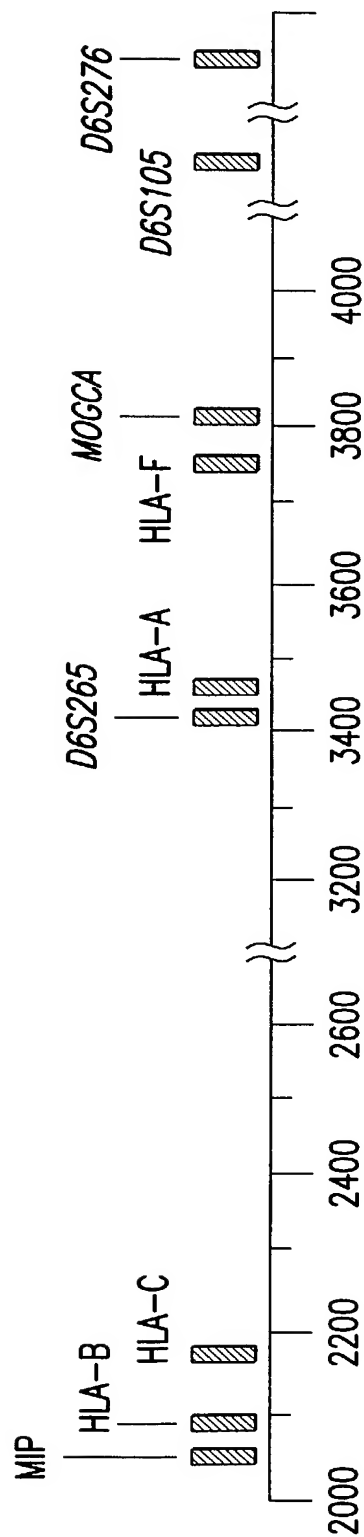
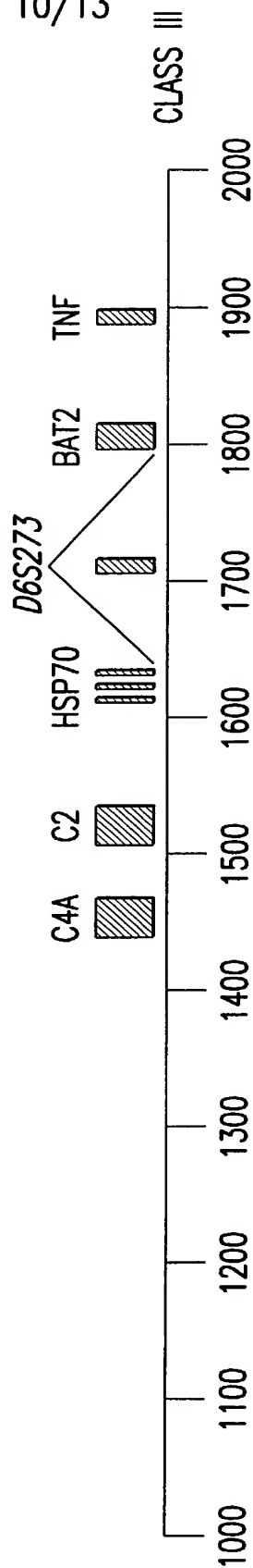


FIG.8

10032495 061002

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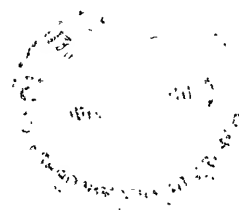


FIG. 9A



FIG. 9B

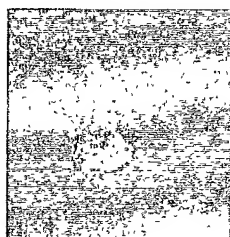


FIG. 9C

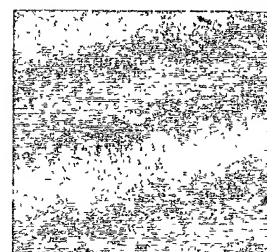


FIG. 9D

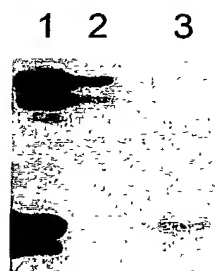


FIG. 9E

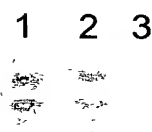


FIG. 9F

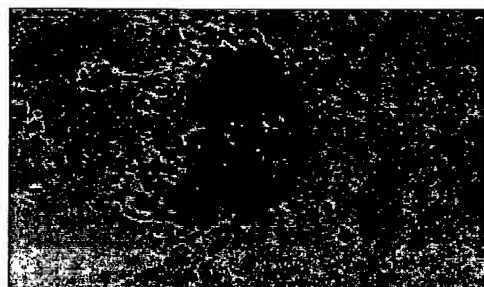
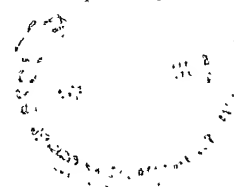


FIG.10A

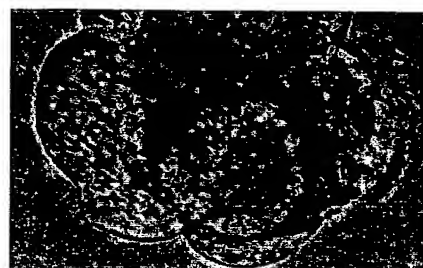


FIG.10B



FIG.10C

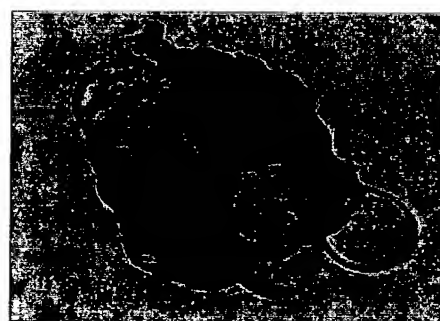


FIG.10D

PCR Primers for Amplification of the DQA1, DQB1, DRB1, DRB3, DRB5, DPA1, and DPB1 Genes

Gene	Primers	Sequences (5' to 3')	Den.	Ann.	Ext.
DQA1	5'Primer 3'Primer 5'Primer 3'Primer 5'Primer	GH26 GH27 GH28NL QB202 GH28NL	(242 bp)	94°C 94°C 94°C 94°C 94°C	72°C 72°C 72°C 72°C 72°C
DQB1	For DQw1 For DQw2 DQw3 DQw4	GTGCTGCAGGTGTAACCTTGACCAG CACGATCCGGTAGCAGCGGTAGAGTTG GCATGTGCTACTTACCAACG CACCTGCAGATCCGGGTACGCCACCTC GCATGTGCTACTTACCAACG	(241 bp) (237 bp)	94°C 94°C 94°C 94°C 94°C	72°C 72°C 72°C 72°C 72°C
DRB1	3'Primer 5'Primer 5'Primer 5'Primer 5'Primer 5'Primer 5'Primer 5'Primer 5'Primer 5'Primer	QB204 5'R2 5'R4 5'R9-1 5'R1 5'R7 5'R10 5'R3568	(261 bp) (263 bp) (256 bp) (206 bp) (206 bp) (206 bp) (265 bp)	94°C 94°C 94°C 94°C 94°C 94°C 94°C 94°C 94°C 94°C	72°C 72°C 72°C 72°C 72°C 72°C 72°C 72°C 72°C 72°C
DRB3	3'Primer	CCGCTGCAGTGGAGCTCCAACCTGGTA	(271 bp)	94°C	72°C
DRB5	5'Primer 3'Primer 5'Primer 3'Primer	TTCCTGTGGCAGCCTAAGAGG GTTCTTGGAGCAGGTTAAAC GAAGCAGGATAAGTTTGAGTG GGTTGCTGGAAGATGCATCT AGTTCTGGAAAGACTCTTCT GGTTGCTGGAAGAGCGCTCC ACGTTCTTGGAGTACTCTACG	(259 bp)	94°C	72°C
DPA1	For 3rd exon For TM exon	CCGCTGCAGTGTGAAGCTCT CCCAGCAGCTTCTTGGAGCT CCGCTGCAGTGTGAAGCTCT CTTGACAGCAGGATAAGTAT CCGCTGCAGTGTGAAGCTCT GGAAGCTTGATCCCCCTGAGGTGACCG GGGGATCCCCAGTCTTGAGGAGCGGC GGAAGCTTGAGGCCCAAGAGCCAATCCA GGGGATCCGCCAGAACGCAGAGACTT	(288 bp) (161 bp)	94°C 94°C 94°C 94°C 94°C 94°C 94°C 94°C 94°C 94°C	72°C 72°C 72°C 72°C 72°C 72°C 72°C 72°C 72°C 72°C
DPB1	5'Primer 3'Primer	GTGAAGCTTTCGCCGAGAGAAATTAC CACCTGCAGTCACTCACCTCGGCGGTG	(299 bp)	94°C	72°C

Note: Den.: Denaturation, Ann.: annealing, Ext.: extension.

FIG.11